

EUROPEAN PATENT OFFICE

Patent Abstracts of Japan

PUBLICATION NUMBER : 01057926
 PUBLICATION DATE : 06-03-89

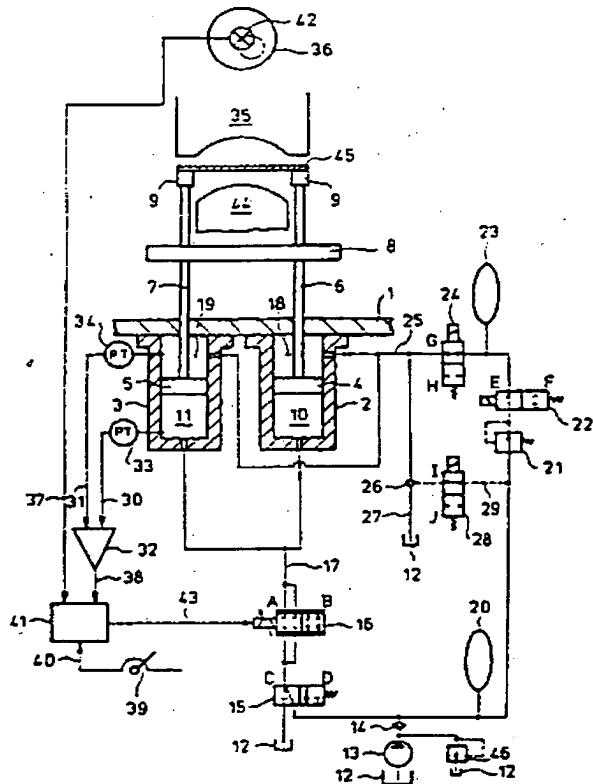
APPLICATION DATE : 28-08-87
 APPLICATION NUMBER : 62214421

APPLICANT : ISHIKAWAJIMA-HARIMA HEAVY IND CO LTD;

INVENTOR : ARIKAWA TAKAMASA;

INT.CL. : B21D 24/02 B30B 15/02

TITLE : DIE CUSHIONING DEVICE FOR PRESS MACHINE



ABSTRACT : PURPOSE: To reduce the generation of noise at material clamping time and to miniaturize the device by supporting a blank holder by a hydraulic cylinder only and adjusting a pressing force by the servovalve of the lower oil chamber side of a hydraulic cylinder and the accumulator of the upper oil chamber side.

CONSTITUTION: A control device 41 transmits a control signal 43 to a servovalve 16 based on a set signal 40 from a setter 39 and a detection signal 37 showing the position of an upper die 35 transmitted from a position detector rotary encoder 42. The pressing force of the hydraulic cylinders 2, 3 is controlled by executing the feeding and discharging of a press oil to lower oil chambers 10, 11 by the servovalve 16. Also in case of the upper die descent, when the lower oil chamber is made in its releasing state by opening the servovalve at a certain opening, the press oil from an accumulator 23 is fed to upper oil chambers 18, 19, a blank holder 9 is descended and the generation of noise of the case of the material clamp by the upper die is prevented.

COPYRIGHT: (C)1989,JPO&Japio

BEST AVAILABLE COPY